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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,536	09/30/2003	Robert Lee Cline	PO-7925/MD-02-52	6084
157	7590	10/06/2006	EXAMINER	
BAYER MATERIAL SCIENCE LLC			SAYALA, CHHAYA D	
100 BAYER ROAD			ART UNIT	
PITTSBURGH, PA 15205			PAPER NUMBER	

1761

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/675,536

Applicant(s)

CLINE ET AL.

Examiner

C. SAYALA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/30/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wynn et al (US Pub 2004/0016276) combined with Moore (US Patent 4804403).

Wynn et al teach providing a controlled release particle, which comprises a particulate filler, a methane coating. The inert filler is defined at claim 13, See also claim 20, 22 and 31. The amount of filler is at claims 48 and 49, and is shown as 1-50% of the coating and 3-30% of the coating. The method of coating is shown at paragraphs [0071] to [0072]. The reference states that a first stream of polyol, a second stream of isocyanate, independently can be used on the fertilizer particle or vice versa. A third stream comprising the filler or one of the polyol or isocyanate with the filler is then applied. The third stream can be applied between the first and second streams or it can be applied as the first or last stream. The size of the filler is given at claim 17.

Furthermore, the reference states:

Alternatively mixtures of some or all components in the coating can be combined and applied in one or more streams. The mixing of coating components and order of introducing these streams into the system can be in any possible combination. These streams can be mixed in a nozzle before entering into the

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drum, or separately sprayed into the drum and mixed before contact with the fertilizer, or mixed on the surface of the fertilizer. Multiple application of these streams may be applied to obtain desired release and mechanical properties.

Moore teaches using diluent fillers may be applied by blending with polyols and then applying this to a fertilizer particle. See col. 8, lines 22 +.

When the fertilizers are dry powders, they can be applied between the base coat and sealing layer between the sealer layer and water-insoluble coating, and between the water-insoluble coatings with each layer of powder applied prior to the application of polyol. The patent specifically states:

Application is made by adding the dry powder diluent to a mobile mass of coated particles to which additional layers of polyfunctional isocyanates and organic polyols are added to react according to the instant invention.

It is preferable to limit the amount of diluent filler used to no more than two times the weight of the polyol used in forming the granule, and the amount more preferably is limited to a weight equal to that of the polyol to obtain excellent attrition resistance.

Several different diluent fillers may be employed in several sequential layers of a single particle or mass of particles. Thus, it was found possible to carry diluents of inerts, herbicides, and nutrients in a given particle or particles.

Based on the above disclosures, even though the patents do not teach the various permutations and combinations of applying the filler to a polyurethane coated fertilizer granulate, in well enunciated steps to recite method claims of the type herein, it would have been obvious to one of ordinary skill in the art, based on the prior art of

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record, that in following the references, each and every embodiment instantly claimed was already known in the art at the time the invention was made. Also based on such prior art, to make further modifications to optimize the various alternatives would have been obvious because the normal desire of scientists or artisans to improve upon what is already known provides the motivation to determine where in a disclosed set of parameters is the optimum combination of conditions to obtain the best possible product.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note col. 7, lines 64-72 in Jefferson et al. (1971).

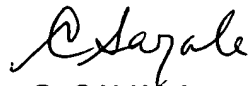
Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA whose telephone number is 571-272-1405.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "C. Sayala".

C. SAYALA  
Primary Examiner  
Group 1700.